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VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
455 12th Street SW
Washington, DC 20554

Re: Modernizing the Form 477, WC Docket No. 11-10

Dear Ms. Dortch,

On February 15, 2019, Steve Morris and Jennifer McKee of NCTA – The Internet & Television Association, Christianna Barnhart of Charter Communications, Beth Choroser of Comcast, Jennifer Prime of Cox Communications, and Tim Stelzig of GCI Communication Corp., met with Preston Wise, Special Counsel to Chairman Pai, to discuss the above-referenced proceeding.[1] NCTA presented its three-step proposal, outlined below and in the attached documents, to revise the Form 477 broadband reporting process so that policymakers and consumers have more accurate information about the availability of broadband in their communities and to better inform the efficient distribution of any future government funding for broadband deployment.

First, the Commission should require fixed broadband providers to submit polygon shapefiles in lieu of the census block availability data required under current rules. We explained that a transition from census blocks to shapefiles would address concerns that the current census block approach overstates coverage, particularly in larger census blocks. The use of shapefiles would dramatically increase the accuracy of the reported data because shapefiles are more closely tied to a provider's service area.

One significant benefit of a reporting regime based on shapefiles is that it is familiar to many providers because it has been used in other contexts by the Commission and by other federal and state agencies. In particular, we explained that several NCTA members recently participated in a voluntary mapping exercise in Kansas that was based on shapefile reporting.[2] We noted that one feature of the Kansas program that the Commission could consider replicating

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1 *Modernizing the Form 477 Data Program*, WC Docket No. 11-10, Further Notice of Proposed Rulemaking, 32 FCC Rcd 6329 (2017).

2 *See* The Kansas Broadband Map, https://cngis.maps.arcgis.com/apps/webappviewer/index.html?id=72ab65f4ac2c4207abd1e575fa148cb4&extent=-11379818.9931%2C4398192.5707%2C-10557968.065%2C4910626.4083%2C102100.

is the use of a third-party to collect data from providers and to assist those providers, particularly small providers, that do not themselves have the capability to convert their data into shapefiles.

NCTA also explained that moving to a regime based on shapefile reporting offers significant advantages over recent proposals to move to an address-based reporting regime.[3] The address-based proposals in the record would require the Commission to engage in a costly and time-consuming exercise to create a database of every address in America before improved data would be collected.[4] We expressed concern that these proposals would create a serious risk that the Commission will not have improved broadband data when Connect America Fund (CAF) Phase II model-based funding ends beginning in 2020. In contrast, NCTA's shapefile-based approach could lead to improved reporting and mapping as early as next year.

The use of addresses as the basis for broadband reporting presents additional issues as well. In particular, during the meeting GCI reiterated that moving to an address-based collection regime would create significant problems in extremely rural areas, such as Alaska, where many locations do not have a traditional street address.[5]

Second, we encouraged the Commission to use crowdsourcing to supplement the Commission's current process for verifying reported data. As noted by Commissioner Rosenworcel, it is time for the Commission to "use the wisdom of the crowd to get our maps right."[6] Under our proposal, once the Commission releases maps under the new shapefile-based reporting regime, any consumer could submit evidence to the Commission raising questions about the accuracy of the maps. The Commission staff would forward that information to the relevant providers, who would then correct their next Form 477 submissions if warranted. The existence of this permanent feedback loop will give a voice to consumers and help to improve the accuracy of maps generated from the Form 477 data.[7]

Third, NCTA's proposal recognizes that one of the most important uses of broadband data and broadband maps is to target subsidies to unserved areas. Many areas that currently are

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[3] *See, e.g.*, Letter from Lynn Follansbee, USTelecom, to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 11-10 (Oct. 17, 2018); Letter from Ola Olyefusi, AT&T, to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 11-10 (Oct. 12, 2018).

[4] We noted that the Department of Transportation has been engaged in a similar effort for many years and does not appear to be close to having a nationwide database. *See, e.g., Coming Soon: An Open Database of Every U.S. Address*, FedScoop (Sept. 28, 2015).

[5] *See* Letter from Julie A. Veach, Counsel for GCI Communication Corp., to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 11-10 (Oct. 25, 2018) ("GCI estimates that perhaps 20 percent of locations in Alaska do not have valid street addresses. . . . Outside of Anchorage, Fairbanks, Juneau, and the Kenai Peninsula and Mat-Su areas near Anchorage, the estimate of locations without valid street addresses jumps to 75 percent.").

[6] Remarks of Commissioner Jessica Rosenworcel, *Better Maps, Better Connectivity: Getting the Data to Close the Broadband Gap*, The Pew Charitable Trusts, Washington, DC (December 11, 2018).

[7] The Commission should be sure to include any necessary disclaimers regarding the accuracy of certain data sources (e.g., online speed tests) as it has done in the context of the Measuring Broadband America program. *See, e.g.,* Technical Appendix to the Eighth MBA Report, Section 3.1 (identifying numerous potential flaws with online speed tests), https://data.fcc.gov/download/measuring-broadband-america/2018/Technical-Appendix-fixed-2018.pdf.

excluded from subsidy mechanisms because a census block is reported as served would be eligible for support under NCTA's proposed shapefile-based approach. To illustrate this point, we provided a sample map showing the difference in coverage between a census block-based approach and a shapefile-based approach in a rural area.

We also explained that moving to address-based reporting for the entire nation is an unnecessary and wasteful method of gathering information about the specific location of unserved homes and businesses. The Commission should use existing tools as a starting point. For example, the Commission already collects data on locations that are served pursuant to CAF and that may be eligible for future support programs. We also encouraged the Commission to make use of existing tools, such as Microsoft's nationwide map of buildings, which would provide a useful visual representation of the locations of buildings within any particular unserved area.[8] During the CAF III process, the Commission could supplement this data as needed with additional information regarding unserved areas.

Respectfully submitted,

/s/ Steven F. Morris

Steven F. Morris

cc: Preston Wise

[8] *See* A Map of Every Building in America, New York Times (Oct. 12, 2018), https://www.nytimes.com/interactive/2018/10/12/us/map-of-every-building-in-the-united-states.html.

IMPROVING BROADBAND REPORTING AND MAPPING

FCC's Task: Create a more granular and accurate map, while efficiently using the resources of the Commission and providers to identify unserved locations, setting the stage for future funding distributions

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Problem #1 – Census Block Reporting. Form 477 reporting based on census blocks overstates coverage creating the perception that maps are inaccurate and raising concerns that unserved areas will be excluded from subsidies

Proposed Solution - Use Polygon Shapefiles for Form 477 Reporting

- Shapefiles are more closely tied to a provider's service area and will eliminate the problem of large unserved areas being counted as served
- Polygon shapefiles can be implemented more quickly and at lower cost than an address-based approach
- Shapefiles already are familiar to many providers and have been used by the FCC, RUS, and many states

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Problem #2 – Verification of Reported Data. The FCC has limited resources for verification of provider submissions which feeds the perception that FCC maps are inaccurate

Proposed Solution – Use Crowdsourcing to Supplement FCC Efforts

- The FCC should establish a verification process in which consumers could report potential inaccuracies in the data
- FCC staff would forward any submissions to the relevant providers, who would make any necessary corrections in subsequent Form 477 filings
- The primary goal of this process is to improve the accuracy of the map, not to generate enforcement activity

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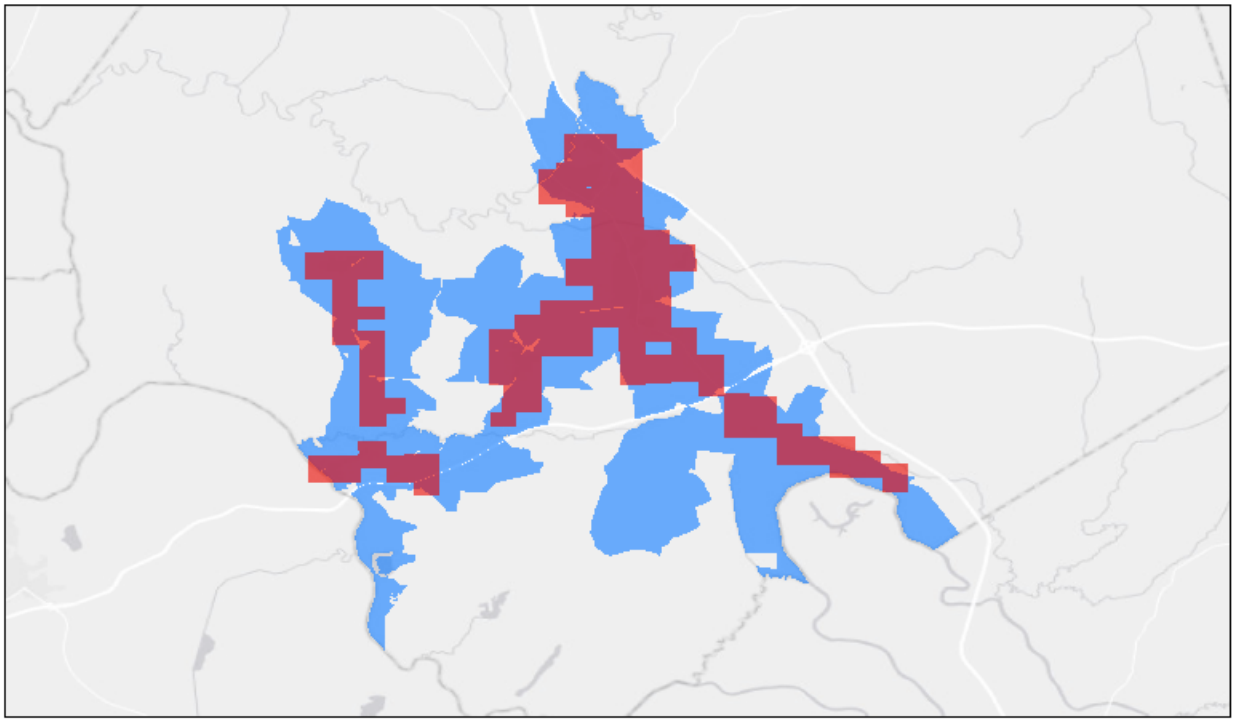
Problem #3 – Identifying Unserved Locations. Lack of details regarding unserved locations creates challenges for future funding distribution

Proposed Solution – Use Existing Tools to Identify Unserved Locations

- Use data from the HUBB database to identify locations that may be eligible for future funding (e.g., locations that have 10/1 broadband due to CAF II funding)
- Microsoft has created an open-source map of all buildings in America that could provide a visual representation of buildings located within an unserved area
- The FCC should make all of this data publicly available for use by other federal and state agencies that distribute broadband funding
- Before distributing any new CAF funding, identify areas where deployment commitments have been made through other government programs (e.g., RUS)



Legend

- Footprint
- 477 Census Blocks